

Docket No. 10592RRUS01U

EXPRESS MAIL NO.
EL356872832US**CLAIMS:**

What is claimed is:

- 1 ~~1.~~ A method in a communications system for processing control messages in a packet-based portion of the communications system, the method comprising:
 - 3 placing a priority indicator in a control message to indicate to an application
 - 4 handling the control messages that the control message is to be given priority in
 - 5 processing; and
 - 6 placing a priority indicator in a header of a packet transporting the control
 - 7 message within the packet-based portion of the communications system to indicate to
 - 8 a node receiving the packet that the packet is to be given priority in processing.
- 1 ~~2.~~ The method of claim 1, wherein the packet is an Internet Protocol packet.
- 1 ~~3.~~ The method of claim 1, wherein the node is one of a server, a router, and a
- 2 device/host platform hosting foreign agent functionality.
- 1 ~~4.~~ The method of claim 1 further comprising:
 - 2 sending a request to the node to reserve processing resources to process the
 - 3 packet.
- 1 ~~5.~~ A method in a communications system for processing control messages for a session in a packet-based network within the communications system, the method comprising:
 - 4 setting an indicator for a control message handling the session within the
 - 5 communications system through the packet-based network; and

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6 sending the control message to the packet-based network, wherein the packet-
7 based network provides preferential processing of the control message in managing
8 the session based on the indicator.

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1 6. The method of claim 5, wherein the indicator is an attribute value pair located
2 in the control message.

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1 7. The method of claim 5, wherein the control message is transported through a
2 plurality of nodes and further comprising setting a second indicator, wherein the
3 plurality of nodes provide preferential handling of the control message based on the
4 second indicator.

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1 8. The method of claim 7, wherein the second indicator is a differential service
2 bit in an Internet Protocol header in a packet transporting the control message.

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1 9. The method of claim 5, wherein a set of nodes is configured to reserve
2 bandwidth for processing selected messages and further comprising:
3 sending a message to the set of nodes to reserve the bandwidth for processing
4 the control message.

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1 10. The method of claim 5, wherein the set of nodes include at least one of a
2 router, a server, and a device/host platform hosting foreign agent functionality.

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1 11. The method of claim 5, wherein the control message is a message from a set
2 of messages to establish the session, terminate the session, and manage the session.

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1 ~~12.~~ A communications system comprising:
2 a packet-based network;

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3 a plurality of nodes connected to the packet-based network; and
4 a source node, wherein the source node sends a control message to a target
5 node through the plurality of nodes, the control message includes a priority indicator
6 used to perform expedited processing of the control message within the plurality of
7 nodes in which the priority indicator is set.

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1 13. The communications system of claim 12, wherein the priority indicator is set
2 for time sensitive information in the control message.

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1 **14.** A node comprising:
2 a bus;
3 a communications adapter connected to the bus, wherein the communications
4 adapter sends and receives messages to and from a packet-based network;
5 a memory connected to the bus, wherein the memory includes instructions for
6 an application; and
7 a processing unit connected to the bus, wherein the processing unit executes a
8 set of instructions to generate a control message for a session within an application at
9 a remote node, place a priority indicator in the control message to indicate to an
10 application handling the control messages that the control message is to be given
11 priority in processing, and place a priority indicator in a header of a packet
12 transporting the control message within the packet-based portion of the
13 communications system to indicate to a node receiving the packet that the packet is to
14 be given priority in processing.

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1 **15.** A communications system for processing control messages in a packet-based
2 portion of the communications system, the communications system comprising:

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3 first placing means for placing a priority indicator in a control message to
4 indicate to an application handling the control messages that the control message is to
5 be given priority in processing; and

6 second placing means for placing a priority indicator in a header of a packet
7 transporting the control message within the packet-based portion of the
8 communications system to indicate to a node receiving the packet that the packet is to
9 be given priority in processing.

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1 16. The communications system of claim 15, wherein the packet is an Internet
2 Protocol packet.

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1 17. The communications system of claim 15, wherein the node is one of a server,
2 a router, and a device/host platform hosting foreign agent functionality.

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1 18. The communications system of claim 15 further comprising:
2 sending means for sending a request to the node to reserve processing
3 resources to process the packet.

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1 **19.** A communications system for processing control messages for a session in a
2 packet-based network within the communications system, the communications
3 system comprising:

4 setting means for setting an indicator for a control message handling the
5 session within the communications system through the packet-based network; and
6 sending means for sending the control message to the packet-based network,
7 wherein the packet-based network provides preferential processing of the control
8 message in managing the session based on the indicator.

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1 20. The communications system of claim 19, wherein the indicator is an attribute
2 value pair located in the control message.

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1 21. The method of claim 19, wherein the control message is transported through a
2 plurality of nodes and further comprising a second setting means for setting a second
3 indicator, wherein the plurality of nodes provide preferential handling of the control
4 message based on the second indicator.

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1 22. The method of claim 21, wherein the second indicator is a differential service bit
2 in an Internet Protocol header in a packet transporting the control message.

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1 23. The communications system of claim 19, wherein a set of nodes is configured
2 to reserve bandwidth for processing selected messages and further comprising:
3 sending means for sending a message to the set of nodes to reserve the
4 bandwidth for processing the control message.

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1 24. The communications system of claim 19, wherein the set of nodes include at
2 least one of a router, a server, and a device/host platform hosting foreign agent
3 functionality.

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1 25. The communications system of claim 19, wherein the control message is a
2 message from a set of messages to establish the session, terminate the session, and
3 manage the session.

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1 ~~26~~ A computer program product in a computer readable medium for processing
2 control messages in a packet-based portion of the communications system, the
3 computer program product comprising:

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4 first instructions for placing a priority indicator in a control message to
5 indicate to an application handling the control messages that the control message is to
6 be given priority in processing; and
7 second instructions for placing a priority indicator in a header of a packet
8 transporting the control message within the packet-based portion of the
9 communications system to indicate to a node receiving the packet that the packet is to
10 be given priority in processing.

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1 27. A computer program product in a computer readable medium for processing
2 control messages for a session in a packet-based network within a communications
3 system, the computer program product comprising:
4 first instructions for setting an indicator in a control message handling a
5 session within the communications system through the packet-based network; and
6 second instructions for sending the control message to the packet-based
7 network, wherein the packet-based network provides preferential processing of the
8 control message in managing the session based on the indicator.

1 28. The computer program product of claim 27, wherein a set of nodes is
2 configured to reserve bandwidth for processing selected messages and further
3 comprising:

4 third instructions for sending a message to the set of nodes to reserve the
5 bandwidth for processing the control message.